

What is claimed is:

1. A power splitter comprising:
  - a) a substrate having a plurality of dielectric layers;
  - 5 b) a capacitor formed between two of the layers;
  - c) a first inductor formed by a first circuit line formed on at least one of the layers;
  - d) a second inductor formed by a second circuit line formed on at least one of the layers;
  - e) a plurality of terminals located on an outer surface of the substrate; and
  - 10 f) a plurality of conductive vias extending between the layers for providing an electrical connection between the capacitor, the first and second inductor and the terminals.
2. The power splitter according to claim 1, wherein the substrate is formed from layers  
15 of low temperature co-fired ceramic.
3. The power splitter according to claim 1, wherein the circuit lines have a sinuous shape.
- 20 4. The power splitter according to claim 1, wherein the circuit lines are formed on more than one layer and interconnected by the vias.

5. The power splitter according to claim 1, wherein an external resistor is connected between two of the terminals.

6. The power splitter according to claim 1, wherein the capacitor further comprises, a  
5 first plate located on a first dielectric layer and a second plate formed on a second dielectric layer.

7. A power splitter having an input port and a first and second output port comprising:

a) a multi-layered dielectric ceramic substrate, the substrate having a first and a second outer surface;

b) a capacitor located within the substrate and connected to the input port;

5 c) a first inductor located within the substrate and having a first and second end, the first end connected to the second output port;

d) a second inductor located within the substrate and having a third and fourth end, the third end connected to the first output port and the fourth end connected to the second end; and

10 e) a plurality of conductive vias extending through the substrate between the first and second outer surfaces, the vias providing electrical connections within the substrate between the inductors, the capacitor and the ports.

8. The power splitter according to claim 7, wherein the input port and the first and

15 second output ports are located on the second outer surface.

9. The power splitter according to claim 7, wherein the substrate is formed from layers of low temperature co-fired ceramic.

20 10. The power splitter according to claim 9, wherein the inductors are formed from circuit lines located the layers.

11. The power splitter according to claim 10, wherein the circuit lines are formed on more than one layer and interconnected by the vias.

5 12. The power splitter according to claim 10, wherein the circuit lines have a sinuous shape.

13. The power splitter according to claim 12, wherein the first and second inductors are electromagnetically coupled to each other.

10

14. The power splitter according to claim 13, wherein an external resistor is connected between the first and second output ports.

15 15. The power splitter according to claim 7, wherein the capacitor further comprises, a first plate located on a first dielectric layer and a second plate located on a second dielectric layer.

16. A power splitter having an input port and a first and second output port comprising:

- a) a multi-layered low temperature co-fired ceramic substrate, the substrate having first, second, third, fourth, fifth, sixth and seventh layers, each layer having a top and bottom surface;
- 5 b) a first circuit line located on the first, second, third and fourth layers and having a first end and a second end, the first end connected to the input port and the second end connected to the first output port;
- c) a first set of vias electrically connecting the first circuit line on the first, second third and fourth layers to form a first inductor;
- 10 d) a second circuit line located on the first, second, third and fourth layers and having a first end and a second end, the first end connected to the input port and the second end connected to the first output port;
- e) a second set of vias electrically connecting the second circuit line on the first, second third and fourth layers to form a second inductor; and
- 15 f) a capacitor formed between the sixth and seventh layers and connected to the input port.

17. The power splitter according to claim 16, wherein the circuit lines have a sinuous shape on each layer.

18. The power splitter according to claim 16, wherein the first and second inductors are electromagnetically coupled to each other.

19. The power splitter according to claim 16, wherein an external resistor is connected  
5 between the first and second output ports.

20. The power splitter according to claim 16, wherein the capacitor further comprises, a first plate located on the sixth layer and a second plate located on the seventh layer.

10 21. The power splitter according to claim 16, wherein the ports are formed by terminals located on an outer surface of the substrate.

22. The power splitter according to claim 21, wherein the terminals wrap around the substrate onto an adjacent outer surface.

15